Statement of Basis - Narrative
NSR Permit

Type of Permit Action: Regular-Significant Revision

Facility: XTO - Bulldog Compressor Station
Company: XTO Energy Inc
Permit No(s).: 8153M1
Tempo/IDEA ID No.: 38798 - PRN20200001
Permit Writer: Urshula Bajracharya

Fee Tracking (not required for Title V)

Tracking	**NSR tracking entries completed:** [] Yes [] No
	NSR tracking page attached to front cover of permit folder: [] Yes [] No
	Paid Invoice Attached: [] Yes [] No
	Balance Due Invoice Attached: [] Yes [] No
	Invoice Comments:

Permit Review	**Date to Enforcement:** TBD	**Date of Enforcement Reply:** TBD
	Date to Applicant: TBD	**Date of Applicant Reply:** TBD
	Date to EPA: TBD or N/A	**Date of EPA Reply:** TBD or N/A
	Date to Supervisor: 01/08/2021	

1.0 **Plant Process Description:** The facility is a typical compressor station with natural gas engines, dehydration, storage tanks, and flares.

2.0 **Description of this Modification:**

The facility is proposing the following modifications:

a) Remove HTR2 and HTR3, ENG10, ENG13 and FL3
b) Increase glycol circulation rate for DEHY1-3
c) Decrease glycol regenerator reboiler (RB1-RB3) unit heat input from 3 MMBtu/hr to 2.0 MMBtu/hr
d) Increase flare purge gas rates, add inlet gas flaring and update FL1-FL2 heights to 145. Increasing steady state flaring associated with increased tank throughput and glycol circulation rate; Update sources that vent to flare.
8) Update tank throughputs
9) Decrease condensate truck loading
12) Change sources that vent to VC1, only combusts vapors from DEHY1-3 still vent and pilot gas.
13) Update ENG1-9 and ENG11-12 VOC/formaldehyde/CO control efficiencies and update emissions factors from Caterpillar Gas Engine Rating Pro (GERP) analysis.
14) Update nomenclature of Gb1a and GB2a to SKT1 and SKT2.
15) Update facility location coordinates
16) Update low pressure separator pressure from 2 psig to 15 psig.

17) Added VOC malfunction emissions.

3.0 Source Determination:

1. The emission sources evaluated include the entire facility.

2. Single Source Analysis:

A. SIC Code: Do the facilities belong to the same industrial grouping (i.e., same two-digit SIC code grouping, or support activity)? Yes

B. Common Ownership or Control: Are the facilities under common ownership or control? Yes

C. Contiguous or Adjacent: Are the facilities located on one or more contiguous or adjacent properties? Yes

3. Is the source, as described in the application, the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes? Yes

4.0 PSD Applicability:

A. The source, as determined in 3.0 above, is an existing PSD Major Source.
B. The project emissions for this modification are not significant.
C. Netting is not required (project is not significant).
D. BACT is not required for this modification (minor Mod).

5.0 History (In descending chronological order, showing NSR and TV): *The asterisk denotes the current active NSR and Title V permits that have not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
8153M1*	02/11/2022 (Signed after Final Order for Hearing)	Significant Modification	This modification will consist of modification of eleven (11) engines, three(3) reboilers, two (2) flares, one (1) still vent emission, two (2) skim tanks, four (4) condensate tanks, two (2) produced water tanks, two (2) vapor recovery units, three (3) TEG dehydrator units, low pressure separator, truck loading and fugitive emissions. The facility will be removing two (2) engines, two (2) heaters and one (1) flare.
8153	05/7/2019	New Major Source NSR	A new compressor station facility

6.0 Public Response/Concerns: On November 24, 2020 the AQB received a hearing request for Bulldog compressor station facility from WildEarth Guardians.

7.0 Compliance Testing:

No tests have been performed.

8.0 Startup and Shutdown:

A. If applicable, did the applicant indicate that a startup, shutdown, and emergency operational plan was developed in accordance with 20.2.70.300.D(5)(g) NMAC? Yes
B. If applicable, did the applicant indicate that a malfunction, startup, or shutdown operational plan was developed in accordance with 20.2.72.203.A.5 NMAC? Yes

C. Did the applicant indicate that a startup, shutdown, and scheduled maintenance plan was developed and implemented in accordance with 20.2.7.14.A and B NMAC? Yes
D. Does the facility have emissions due to routine or predictable startup, shutdown, and maintenance? If so, have all emissions from startup, shutdown, and scheduled maintenance operations been permitted? Yes

9.0 Compliance and Enforcement Status:

According to the email received from Shannon Durant on 01/06/2021: "There are currently no open NOVs or ongoing Settlement Agreements for this facility with Enforcement."

10.0 Modeling:

The modeling report from Angela Raso (01/22/2021) states: "This modeling analysis demonstrates that operation of the facility described in this report neither causes nor contributes to any exceedances of applicable air quality standards. The standards relevant at this facility are NAAQS for CO, NO2, PM2.5, PM10, and SO2; NMAAQS for CO, NO2, and SO2; and Class I and Class II PSD increments for NO2, PM2.5, PM10, and SO2."

11.0 State Regulatory Analysis (NMAC/AQCR):

STATE REGU-LATIONS Citation 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	Justification:
2.1	General Provisions	Yes	Entire Facility	The facility is subject to Title 20 Environmental Protection Chapter 2 Air Quality of the New Mexico Administrative Code so is subject to Part 1 General Provisions, Update to Section 116 of regulation for Significant figures & rounding. Applicable with no permitting requirements.
2.3	Ambient Air Quality Standards	Yes	Entire Facility	20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
2.7	Excess Emissions	Yes	Entire Facility	Applies to all facilities' sources
2.38	NMAC Hydrocarbon Storage Facility	Yes	OT1 – OT4	The condensate tanks are subject and the site uses a flare to comply with 20.2.38 NMAC
2.61	Smoke and Visible Emissions		FL1-2, RB1-3, ENG1-9, ENG11-12, HTR1	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC).
2.70	Operating Permits	Yes	Entire Facility	The source is a Title V Major Source as defined at 20.2.70.7 NMAC.

STATE REGU-LATIONS Citation 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	Justification:
2.71	Operating Permit Fees	Yes	Entire Facility	Source is subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC.
2.72	Construction Permits	Yes	Entire Facility	NSR Permits are the applicable requirement, including 20.2.72 NMAC.
2.73	NOI & Emissions Inventory Requirements	Yes	Entire Facility	Applicable to all facilities that require a permit. PER **>** 10 tpy for a regulated air contaminant.
2.75	Construction Permit Fees	Yes	Entire Facility	This facility is subject to 20.2.72 NMAC
2.77	New Source Performance Standards	Yes	See Sources subject to 40 CFR 60	Applies to any stationary source constructing or modifying and which is subject to the requirements of 40 CFR Part 60.
2.78	Emissions Standards for HAPs	Yes	See Sources subject to 40 CFR 61	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61.
2.79	Permits Nonattainment Areas	No		This facility is not located in, not does it affect, a nonattainment area. Link to Non-attainment Link areas
2.82	MACT Standards for Source Categories of HAPs	Yes	See sources subject to 40 CFR 63	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63.

12.0 Federal Regulatory Analysis:

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
Air Programs Subchapter C (40 CFR 50)	National Primary and Secondary Ambient Air Quality Standards	Yes	Entire Facility	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.
NSPS Subpart A (40 CFR 60)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 60	Applies if any other subpart applies.
40 CFR Part 60 Subpart JJJJ (Quad -J)	Standards of Performance for Stationary Spark. Ignition Internal Combustion Engines	Yes	ENG1-3, ENG4-9 TBD ENG11-12	The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of section 60.4230. For the purposes of this subpart, the date that construction commences is the date the engine is

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				ordered by the owner or operator.
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	Yes	FUG, Compressors for Engines: ENG1 – ENG3, ENG42 – ENG92 (TBD), ENG 11 – ENG12	**See 60.5360a**
MACT Subpart A (40 CFR 63)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 63	Applies if any other subpart applies.
40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities –	Yes	DEHY1-3	In accordance with the definition of a major source as defined in 40 CFR 63.761, this facility is Subject to the requirements of 40 CFR 63 Subpart HH Facility was major for HAPS after June 17, 2002. Once in always in.
40 CFR 63 Subpart ZZZZ (Quad Z)	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	ENG1-3, ENG4-9 (TBD), ENG11-12	See 63.6580 and EPA Region 1's Reciprocating Internal Combustion Guidance website. A facility is subject to this subpart if they own or operate a stationary RICE at a major.

13.0 Exempt and/or Insignificant Equipment that do not require monitoring:

Unit Number	Source Description	Make	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction[2]
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1. a)	Date of Installation /Construction[2]
ROAD	Haul Road Emissions	N/A	N/A	N/A	20.2.72.202.B.5	N/A
			N/A	N/A	20.2.72.202.B.5	N/A

14.0 New/Modified/Unique Conditions (Format: Condition#: Explanation):

A. New Condition 1: A107.D Malfunction Emission, A107.E SSM Flare
B. New Condition 2: A201.E 40 CFR 60, Subpart JJJJ (existing equipment)
C. New Condition 3: A201.G 40 CFR 63, Subpart ZZZZ (existing equipment)
D. New Condition 4: A206.B Flare Gas Flow Monitoring and Gas Analysis
E. New Condition 5: A206.C Flare Emissions Calculation

15.0 Permit specialist's notes to other NSR or Title V permitting staff concerning changes and updates to permit conditions.

A. The condition A201.A Notification of Catalyst Installation was removed because all engines are required to have catalyst when installed. Therefore, notification is not required when installing new engines.
B. The condition A203.C Vapor Combustor: Control Device for Oil Tanks, Gunbarrel Separators, Low-Pressure Separator, Produced Water Tanks, and Uncondensed Vapors from BTEX Condensers was removed because the vapor combustor does not control any of the tanks. The tanks are controlled by flares only. The LPS is controlled by VRU which are them routed to the flares.
C. Notes on hazardous air pollutants (HAPs) and toxic air pollutants (TAPs) applicability:
   The Bulldog compressor station is major for HAPs for Formaldehyde.

   Bulldog compressor station is an Oil and Gas production facility, in accordance with the definition under 20.2.72.401(F) NMAC. Therefore, it is exempt from applicability and requirements of TAPs per applicability 20.2.72.402(C)(5) NMAC for all TAPs under the table 20.2.72.502 NMAC.